
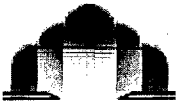


Christopher  
Lichens/R9/USEPA/US  
05/10/2004 04:55 PM

To Frederick Schauffler/R9/USEPA/US@EPA  
cc Elizabeth Cox/R9/USEPA/US@EPA  
bcc  
Subject Re: markup of Omega SOW 

Thanks Fred. Thanne, let me know if you want to talk about any of the changes.

Chris  
Frederick Schauffler



Frederick Schauffler  
05/10/2004 04:45 PM

To: Christopher Lichens/R9/USEPA/US@EPA  
cc: Elizabeth Cox/R9/USEPA/US@EPA  
Subject: markup of Omega SOW

Chris -  
here's my markup (not a lot of stuff) of the SOW that Thanne did the final formatting on. I used red font to show suggested additions, red strikethrough to show deletions, red bold to indicate a conflict with the UAO (only one of those) and yellow highlight to show proposed use of updated versions of guidance. So basically, look at anything that isn't black or blue font.

Let me know if you have questions.

Fred



Omega RI field scope 2 May 6 2004 markup.

**ATTACHMENT 1 TO AMENDED UNILATERAL**  
**ADMINISTRATIVE ORDER 2004-0004**

**STATEMENT OF WORK**  
**REMEDIAL INVESTIGATION FIELD**  
**ACTIVITIES**

**OMEGA CHEMICAL SUPERFUND SITE**  
**OPERABLE UNIT TWO**

**WHITTIER, CALIFORNIA**

May 6, 2004

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**STATEMENT OF WORK**  
**OMEGA CHEMICAL SUPERFUND SITE**

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**Attachment 1: EPA Guidance Documents**

**Attachment 2: Existing Groundwater Monitoring Well Locations and Construction Summary**

## **INTRODUCTION**

Respondents shall conduct defined elements of a Remedial Investigation (the project) in accordance with the Administrative Order for Remedial Investigation, Docket 2004-0004 (the Order), this Statement of Work (SOW), and relevant EPA guidance. The major tasks and deliverables required by the Order are: 1) Selecting a Contractor; 2) Project Planning; 3) Groundwater Monitoring Well Installation; 4) Sampling; and 5) Project Completion Report. If EPA concludes that additional work is needed after implementation of the approved Work Plan, EPA may require Respondents to submit an addendum to the approved Work Plan or a new Work Plan. All project planning documents must be approved by EPA prior to the initiation of field activities. Respondents shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the project, except as otherwise specified in the Order.

EPA will be responsible for oversight of the Respondents' activities throughout the project. EPA contractors may assist EPA in providing field oversight and collecting split samples.

### **1 PURPOSE**

Respondents shall conduct project activities at the Omega Chemical Superfund Site (the site) and develop the data necessary to support the selection of a site remedy that will eliminate, reduce, or control risks to human health and the environment. This SOW sets forth the framework and requirements for this effort.

### **2 GENERAL REQUIREMENTS**

The Respondents shall conduct project activities in accordance with this SOW and relevant EPA guidance documents. Activity-specific guidance documents are listed in the text of this SOW and more general or multi-task guidance documents are listed in Attachment 1. In all cases the Respondents shall use the most recently issued guidance.

Within twenty-one (21) [UAO says 7] [do all day counts like this one need to have both the text and the arabic numeral?] days of the Effective Date of the Order, the Respondents shall designate a Project Coordinator to report directly to the EPA Remedial Project Manager (RPM). The Project Coordinator is responsible for ensuring that the SOW is implemented according to the terms of the Order and that all performance standards are met.

The Respondents shall communicate at least weekly with the EPA RPM, in face-to-face meetings, through conference calls, or by email. The Respondents shall document all decisions that are made in meetings and conversations with EPA and forward this documentation to the RPM within two working days of the meeting or conversation.

The Respondents shall furnish all necessary personnel, equipment, materials, and services needed

for, or incidental to, performing and completing this SOW. The Respondents shall maintain all technical records in accordance with this SOW. During the period the Respondents are completing the SOW activities, the Respondents shall submit to the RPM two hard copies (and/or an electronic copy if directed to do so by the RPM) of each technical memorandum, data summary, or other document produced pursuant to this SOW.

EPA will review deliverables prepared through implementation of this SOW. However, acceptance of documents by EPA does not relieve the Respondents of responsibility for the technical quality and reliability of these documents.

### **3 REQUIRED TASKS AND SUBMITTALS**

#### **3.1 Task 1: Contractor Selection**

Within 21 days of the Effective Date of the Order, Respondents shall submit to EPA the name and qualifications of an environmental contractor (contractor) to perform the work required under the Order. The proposed contractor must demonstrate experience with at least three projects of similar scope and magnitude within the last three years. Project summaries, including a narrative description of the activities performed, project team personnel, project start and end dates, dollar value, and client references shall be submitted to EPA. Resumes of proposed contractor personnel shall also be provided and demonstrate experience relevant to this SOW.

#### **3.2 Task 2: Project Planning**

##### **Work Plan**

Within 14 days of EPA approval of the contractor, Respondents shall submit to EPA a complete work plan for the project, including a description and schedule for completing all field activities and follow-up reports. If EPA disapproves or requires revisions to the work plan, in whole or in part, Respondents shall amend and submit to EPA a revised work plan which is responsive to the directions in all EPA comments. The revised work plan must be submitted within 14 days of receiving EPA's comments. Unless EPA agrees otherwise, the work plan ~~should~~ shall include the following elements:

- a brief description of the Site, including its location, past and current Site activities, and any significant ecological, cultural or natural resource features;
- a description of the roles and responsibilities of organizations and key personnel involved in the the project, including lines of authority;
- a summary of existing information on the hydrogeology of the site area, including subsurface stratigraphy, a description of the aquifer system, and influences on and temporal variation in groundwater elevations and flow;
- a summary of existing information on groundwater quality at and in the vicinity of the Site, including the nature, extent, and movement of contaminants in the groundwater, and an assessment of the quality and usefulness of existing data;
- a description of planned groundwater investigation activities pursuant to the

- Order, including a preliminary estimate of the number, location, depth, and construction of groundwater monitoring wells;
- the rationale for proposed groundwater monitoring well locations and screen intervals, in relation to potential source areas, groundwater elevations and flow direction, and aquifer structure;
- plans for securing property and/or access agreements and satisfying permit requirements;
- a description of tasks to be performed and work products that will be submitted, including a detailed outline of the Project Completion Report;
- provisions for weekly reporting to EPA by fax or email during implementation of field activities;
- a schedule for each task and deliverable, including all field work and submittal of a draft Project Completion Report;
- the estimated cost of implementing the Work.

### **Sampling and Analysis Plan**

Within 14 days of EPA approval of the work plan, Respondents shall submit to EPA a sampling and analysis plan (SAP). EPA will provide a hard copy and/or an electronic copy of a SAP prepared by its contractor, CH2M Hill, that the Respondents can use as the basis of their SAP.

The SAP shall consist of a field sampling plan (FSP) and a quality assurance project plan (QAPP), as described in EPA guidance documents, including, without limitation, "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-98/018, February 1998)[this is not the current version; replace with the December 2002 version of the same title but new number EPA/240/R-02/009], and "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA 240/b-01/003, March 2001). If EPA disapproves of or requires revisions to the SAP, in whole or in part, Respondents shall amend and submit within 14 days of receiving EPA's comments a revised SAP which is responsive to the directions in all EPA comments. The FSP shall be written so that a field sampling team unfamiliar with the site would be able to gather the samples and field information required.

The FSP should define in detail the sampling and data-gathering methods that will be used on the project. Unless EPA agrees otherwise, it should include the following from the CH2M Hill SAP: descriptions of sampling objectives; sample locations and frequencies; numbers and types of samples [including Quality Control (QC) samples]; sampling equipment and equipment decontamination procedures; sampling and data collection methods; sample labeling; sample packaging and shipment; sample analysis; well construction; well development procedures; management of drill cuttings, well development water, purge water produced during sampling, and other investigation-derived wastes; field documentation requirements; and planned uses of the data.

The QAPP should describe the project objectives and organization, functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that will

be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan (NCP) requirements as identified at 40 CFR 300, et. seq. In addition, the QAPP should address sample custody, analytical procedures, data reduction, data validation procedures to ensure that reported data are accurate and defensible, personnel qualifications, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data; protocols for transferring data to EPA in electronic format; document control procedures, and preservation of records in accordance with the Order.

Respondents should be prepared to demonstrate to EPA's satisfaction that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs in the approved QAPP for the site. The laboratory must have and follow an approved QA program. Respondents should only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA.

EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval. EPA may require that Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specifications. Respondents will provide assurances that EPA has access to laboratory personnel, equipment and records, sample collection, transportation and analysis.

### **Health and Safety Plan**

Within 14 days of EPA's approval of the work plan, Respondents shall prepare and submit a Health and Safety Plan in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan should address or provide employee training, a health and safety risk analysis, a description of monitoring and personnel protective equipment, medical monitoring, standard operating procedures, contingency plans, and site control. The Health and Safety Plan is not subject to EPA approval; however, EPA will review the Plan to ensure that all necessary elements are included, and that the Plan provides for the protection of human health and the environment.

### **Community Involvement**

EPA will prepare a community involvement plan, in accordance with EPA guidance and the NCP. Respondents shall provide information supporting EPA's community involvement programs as needed and requested by EPA.

### **3.3 Task 3: Groundwater Monitoring and Extraction Well Installation**

Within 90 days of EPA's approval of the SAP, the Respondents shall install, and sample groundwater monitoring wells as described in the SAP. All wells shall be constructed in conformance with California Well Standards (Department of Water Resources Bulletin 74-90, 1991) and with requirements of permitting agencies. Unless an alternate construction is approved by EPA, all wells shall be constructed with minimum four-inch diameter casing and screen, using appropriately graded filter pack and a minimum three-foot seal. The annular space to the surface should be filled with neat cement and five percent bentonite grout or similar material. All wells shall be developed by a combination of surging, bailing, and pumping. General water quality parameters including pH, temperature, specific conductance, and turbidity shall be monitored during pumping. Development should continue until at least ten casing volumes of water have been removed, water quality parameters are stable, and turbidity approaches 5 NTU. The monitoring wells should be equipped with dedicated (preferably stainless steel) bladder pumps to allow for low-flow sampling. Surface completions shall include flush-mount, traffic-rated well vaults set in concrete. Locks shall be installed on each well to prevent unauthorized access.

All required permits for installation of wells shall be obtained and copies of each permit sent to EPA within one week of issuance. Any difficulty or delays in obtaining permits shall be reported to EPA as soon as possible. Wells within City of Whittier and County of Los Angeles rights-of-way (ROW) may be placed in the street. Wells within City of Santa Fe Springs ROW must be placed in parkway areas. Excavation/encroachment permits from the municipal and County entities must be obtained, as required, in addition to well permits from the County of Los Angeles Department of Environmental Health. In addition, copies of City and County inspections and approvals of work shall be sent to EPA within one week of issuance. The Respondents shall verify and follow all applicable permitting requirements.

Field reports shall be submitted to EPA on a weekly basis. All reports must be signed by the field manager responsible for field oversight of construction. The reports shall document all activities completed and correlate progress to date with the required construction schedule. The report shall also identify significant problems encountered during the construction work and clearly describe changes made to the design in the field. All change orders which impact the approved design (including equipment, materials, configuration) shall be reported to EPA even if the cost and schedule are not impacted. The Respondent may submit daily field reports in lieu of summarizing weekly field activities; however, a written narrative summarizing the additional, required information must be included in the report (i.e., progress, change orders, problems arising in the field, etc.).

The final approved monitoring well construction drawings shall be updated to reflect all changes made during construction regardless of whether or not the changes were made with formal change order documents or were no-cost or no-time substitutions. The Respondents may either update the final approved design with all changes made during construction or may clearly modify the final approved documents to indicate changes made in the field by adding the



applicable detail drawings, layout diagrams, etc. In addition, the submittal shall clearly describe all equipment and/or material changes or substitutions that were made during construction. A "redline" or "mark-up" set made in the field will not be accepted as a satisfactory submittal. The submittal shall be re-stamped by a licensed/registered professional (e.g., Professional Engineer or California Registered Geologist). All modifications to the approved design shall be submitted to EPA within 30 days of completing construction.

#### **New Extraction Well**

Within 90 days of EPA's approval of the SAP, the Respondents shall also install a new extraction well in the vicinity of the MW08 well cluster. The new extraction well will be constructed with 6-inch casing and screen and screened between 60 and 80 feet below ground surface to approximate the second saturated sand interval screened in MW08B, MW08C, and MW08D. Surface completions shall include flush-mount, traffic-rated well vaults set in concrete. Locks shall be installed on each well to prevent unauthorized access. Installation of permanent pumps will not be required for the new extraction well.

#### **3.4 Task 4: Sampling**

Following development, the new groundwater monitoring wells installed under this Order shall be sampled with dedicated bladder pumps that allow sampling using low-flow techniques. Each well shall be purged at approximately 0.1 gallons per minute for at least 30 minutes, and the purge water shall be monitored for pH, temperature, specific conductance, dissolved oxygen, and oxidation-reduction potential using a flow-through cell at approximately three-minute intervals. The groundwater samples shall be collected after three consecutive readings show variation of the monitored parameters of less than 5%. Water level data shall also be collected within one 12-hour period, before sampling occurs.

All groundwater samples shall be analyzed, at a minimum, for Volatile Organic Compounds (VOCs) by EPA/SW836 Method 8260B; for Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270; for perchlorate by EPA Method 314; for dissolved metals by EPA Method 200.7, 200.8, and SOP 507; for hexavalent chromium by EPA Method 218.6; for cyanide by EPA Method 335.2; for NDMA by EPA Method 1625M; and for parameters (such as nitrogen, sulfates, total organic carbon) used to assess natural attenuation of the contaminants. Practical Quantitation Limits should be no higher than the lowest of the following: EPA Maximum Contaminant Level (EPA-MCL), California Maximum Contaminant Level (CA-MCL), California Action Level (AL). If there is no EPA-MCL, CA-MCL, or AL available for an analyte, the Practical Quantitation Limit for the analyte should be no higher than the EPA Preliminary Remediation Goal (PRG) for the Tap Water exposure pathway. PRGs are available on the EPA Region 9 website at: <http://www.epa.gov/region09/waste/sfund/prg/files/02table.pdf>

#### **3.5 Task 5: Project Completion Report**

The Respondents shall prepare a project completion report that presents all data and well construction information. At a minimum, elements of the completion report shall include the following:

- **Introduction.** Purpose of the report, site background, and report organization.
- **Study Area Investigation.** Summary of field activities, including previous technical memoranda/weekly reports, lithologic logs and final approved well construction drawings. Based on the results of field activities, discuss surface features, geology, soils, and hydrogeology of the study area.
- **Presentation of Data.** Results of groundwater monitoring data, including contaminants of concern, vertical and lateral extent of contamination. Discuss any limitations regarding use of the data.

The draft report shall be submitted to EPA within 30 days of completing field activities. The final report shall be submitted within 14 days of receiving EPA's comments on the draft report.

## Attachment 1

### EPA Guidance Documents

The Respondents shall perform all activities in accordance with EPA guidance, including but not limited to the following:

- CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
- Community Relations in Superfund — A Handbook, U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B. [replace with Superfund Community Involvement Handbook, April 2002, EPA 540-K-01-003]
- Data Quality Objectives for Remedial Response Activities, U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
- Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3-01.
- National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.
- Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
- A Compendium of Superfund Field Operations Methods, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

- Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
- Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.

Attachment 2

**Existing Groundwater Monitoring Well Locations  
and Construction Summary**